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RL BLOOM 9:3418-9431(1999).

C1 - FUNCTION: APOPPOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
C2 - FUNCTION: APOPPOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
C3 - FUNCTION: APOPPOTIC SUPPRESSOR. THE MID 2 (TRAF1 AND TRAF2) TO
C4 - FUNCTION: C5 - FUNCTION: C5 - FUNCTION: C6 - FUNCTI
PROSITE: PSO1282; BIR_REPEAT_1; 3
PROSITE: PS50143; BIR_REPEAT_2; 3
PROSITE: PS50209; CARD; 1.7
PROSITE: PS01209; 
                                                                                                                                                                                                                                                                                                                          Pfam: PF00653; BIR: 3.
Pfam: PF00619; CARD: 1.
Pfam: PF006097; zf-C3HC4; 1.
SMART; SM00238; BIR: 3.
SMART; SM00114; CARD: 1.
SMART; SM00144; RING: 1.
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EMBL; U45878; AAC50371.1; -
EMBL; U37546; AAC50507.1; -
EMBL; AF070674; AAC83232.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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ten Cate J.W., Pannekoek H.;
"Vascular endothelial genes that are responsive
factor-alpha in vitro are expressed in atherosol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE=99252096; PubMed=10233894;
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Uren A.G., Pakusch M., Hawkins C.J.,
"Cloning and expression of apoptosis
function to inhibit apoptosis and/or
receptor-associated factors.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. TISSUE=Fetal liver;
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Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MIM; 60171
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inhibitor of apoptosis protein-1, stannin, and two novel
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                                           BIR 1.
BIR 2.
BIR 3.
CARD.
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        RING-TYPE
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inhibitory protein ho
bind tumor necrosis fi
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BIR3_MOUSE
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01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-2097 (Rel. 35, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 3 (INHIBITOR OF APOPTOSIS
                                                         use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                 MEDLINE-99110590; PubMed-9441758;
Liston P. Lafebvre C. Fong W.G. Xuan J.Y., Korneluk R.G.;
"Genomic Characterization of the mouse inhibitor of apoptosis
                       EMBL; L49433; AAC42078.1; EMBL; U88909; AAC53532.1;
                                                                                                                                                                                                                                                                              Genomics 46:495-503(1997)
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MEDLINE-96128127; PubMed-8548810;
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BIRC3 OR API2 OR IAP2.
             MGD; MGI:1197009; Birc3
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                                                                                                                                                                                                                                                                                                                                                                                 the M., Pan M. G., Henzel W.J., Ayres T.M., Goedel D.V.;
he TMFR2-TRAW signaling complex contains two novel proteins related
baculovital inhibitor of apoptosis proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
                                                                                                                                              FUNCTION: APOPPOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS
WITH TWE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAP1 AND TRAP2) T
FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUME
NECROSIS FACTOR RECEPTOR 2 (TWER2).
SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL).
TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LUNG,
TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN, SPLEEN, LUNG,
LIVER, SKELETAL MUSCLE, KIDNEY, AND TESTIS.
SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEARS.
SIMILARITY: CONTAINS 1 CARD JOMAIN.
SIMILARITY: CONTAINS 1 CARD JOMAIN.
                                                                                                     s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Burpean Bioinformatics institute. There are no restrictions on its
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Rodentia;
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Sciurognathi;
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thi; Muridae; Murinae; Mus
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Matches 52
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Pfam; PF00059; CARD; 1.
Pfam; PF00059; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM001184; RING; 1.
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CONFLICT
SEQUENCE
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01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL TARPEAT-CONTAINING PROTEIN 2 (INHIBITOR
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PROSITE;
                                                                                                                                                   Genomics 46:495-503(1997).

Genomics 46:495-503(1997).

1- FUNCTION: APODYDYTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMO NECROSIS FACTOR RECEPTOR 2 (TNFR2) (BY SIMILARITY).

1- SUBCELLUAR LOCATION: CYTOPLASMIC (POTENTIAL).

1- SUMLIARITY: BELONGS TO THE IAP FAMILY.

1- SIMILARITY: CONTAINS 3 BIR REPEATS.

1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOUSE
                                                              use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN 1) (MIAP1) (MIAP-1).
BIRC2 OR API1 OR IAP1.
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REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
EMBL; U88908; AAC53531.1; -. MGD; MGI:1197007; Birc2. InterPro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                 MRDLINE-98110590; PubMed-9441758;
Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
"Genomic characterization of the mouse inhibitor of apoptosis
                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
TISSUE=Skeletal muscle;
                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
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                                                  or send
                                                                                         the European Bioinformatics Institute. Thuse by non-profit institutions as long
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                                                                                                                                                                                                                                                                                      and 2 genes.
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                                                                                                                     SWISS-PROT entry is copyright. It is produced through a collaboration
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52; Conservative
                                                  an email to license@isb-sib.ch).
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                                                                                                                  the Swiss Institute of Bioinformatics
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58
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BIR 2.
BIR 3.
CARD.
RING-TYPE.
E -> K (IN
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Sciurognathi; Muridae;
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E08969D93C6C610D
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No. 1.9e-30
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                                                                                         There are no restrictions ong as its content is in
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                                                                                                                   EMBL outstation
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BIR_CHIZE

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GN 17A.

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Best Local 9
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Pfam: PF00619; CARD: 1.
Pfam: PF00619; Zf-C3HC4; 1.
SMART: SM00238; BIR: 3.
SMART: SM00114; CARD: 1.
SMART: SM00114; RING: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BIR_CHICK
Q90660;
01-NOV-1997
01-NOV-1997
                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation. The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Digby M.R., Kimpton *ITA, a vertebrate }
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-97101112; PubMed-8945639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROTEIN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-AUG-2001 |
INHIBITOR OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS01282; BIR_REPEAT_1; PROSITE; PS50143; BIR_REPEAT_2; PROSITE; PS50209; CARD; 1.
     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lymphocytes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID-9031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APOPTOSIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001315; CARD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26
                                                                                                                                                                                                                                         A CELL BLOI. 15:981-988(1996).

FUNCTION: APOPTOTIC SUPPRESSOR (BY SIMILARITY).

SUBCELLULAR LOCATION: PREDOMINANTLY NUCLEAR.

TISSUE SPECIFICITY: CELLS OF THE T LYMCHOCYTE LINEAGE. FOUND II
BOTH CORTICAL AND MEDILLARY CELLS OF THE THYMUS.

DEVELOPMENTAL STACE: HIGH LEVELS ARE INDUCED MITHIN 4-8 HOURS OF TCELL ACTIVATION IN SPLEEN AND THYMUS.

TCELL ACTIVATION IN SPLEEN AND THYMUS.

SIMILARITY: CONTAINS 3 BIR REPEATS.

SIMILARITY: CONTAINS 1 CARD DOMAIN.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
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  U27466; AAB48118.1; -. Pro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a vertebrate homologue of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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167 94 BIR 1.

167 233 BIR 2.

253 320 BIR 3.

253 320 CARD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Rel. 35, Created)
(Rel. 35, Last sequence update)
(Rel. 40, Last annotation update)
APOPTOSIS PROTEIN (IAP) (INHIBIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67198 MW;
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Pred.
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; AD7F73E6849317D1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IAP
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.5e-29;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T CELL APOPTOSIS
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RESULT 6
BIR4_HUMAN
ALD DEFINITION OF THE PROPERTY OF THE PROPERTY
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PP00653; BIR; 3;
Pfam; PP00619; CARD; 1;
Pfam; PP00097; zf-C3HC4; 1
SMART; SM0023B; BIR; 3;
SMART; SM00114; CARD; 1.
SMART; SM00114; CARD; 1.
SMART; SM00114; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHI4 HUMAN STANDARD; PRT; 497 AA.

P98170; Q99014;

01-0CT-1996 (Rel. 34, Created)

01-0CT-1996 (Rel. 34, Last sequence update)

20-AUG-2001 (Rel. 40, Last annotation update)

BACULOVIRAL IAP REPEAR-CONTAINING PROTEIN 4 (INHIBITOR OF APOPTOSIS

PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED IAP)

(IAP-LIKE PROTEIN) (HILP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REPEAT
ZN_FING
SEQUENCE
                     Deveraux Q.L., Takahashi R., Salvess
"X-Linked IAP is a direct inhibitor
Nature 388:300-304 (1997).
-I- FUNCTION: APOPTOTIC SUPPRESSOR.
                                                                                                                                                                                                                                                         TISSUE-Fetal heart:
MEDLINE-96256286; PubMed-8654366;
Duckett C.S., Nava V.E., Gedrich R.W., Clem R.
Gilfillan M.C., Shiels H., Hardwick J.M., Thom
"A conserved family of cellular genes related
gene and encoding apoptosis inhibitors.";
EMBO J. 15:2685-2694(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Fetal brain;
MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird
Farahani R., McLean M., Ikeda J., Mackenzie A.,
"Suppression of apoptosis in mammalian cells by
family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Apoptosis;
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                         MEDLINE-97373959;
                                                                                                                                                                                               Grafham
                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIRC4 OR API3 OR IAP3 OR XIAP.
                                                                                                                                                                          Submitted
                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                FUNCTION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
                                                                                                                                                                        (APR-2000)
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30 97
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176
262
564
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                            PubMed-9230442;
-----shi R., Salvesen G.S., Keev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   329
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                                                                                                                                                                        the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat; Nuclear protein
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Pred. No. 1.1e
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BIR 1.
BIR 2.
BIR 3.
RING-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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                     INHIBITOR
                                                                                                                                                                                                                                                                                                                                                   Clem R.J., van Dongen J.L.,
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                                                                                                                                                                                                                                                                                                        Thompson
ated to th
                                                                                    Reed J.C
                     OF CASPASE-3 AND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S., Cherton-Horvat
Korneluk R.G.;
NAIP and a related
                                                                                                                                                                                                                                                                                                      the
                                                            proteases.";
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BIRA_MOUSE
ID BIRA_MOUSE
AC Q60980
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Best Local S
Matches 28
                                                                                                                                                                                                                                                                                                                                                                                           BIR4_MOUSE STANDARD; PRT; 496 AA. 660989; 008865; 660989; 001-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 20-AUG-2001 (Rel. 40, Last sequence update) BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INHIBITOR OF APOPTOSIS PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED IAP) (MIAP-3).
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InterPro: IPRO01841; Znf_rii
Pfam; PF00653; BIR; 3.
Pfam; PF00097; Zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                             SEQUENCE FROM
                                                                                                    Uren A.G., Pakusch M., Hawkins C.J., "Cloning and expression of apoptosis function to inhibit apoptosis and/or receptor-associated factors.";
                                                                                                                                                                                                     STRAIN-C57BL/6 X CBA; TISSUE-Liver; MEDLINE-96209843; PubMed-8643514;
                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:
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REPEAT
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PROSITE; PSO1413; BIR_REPEAT_2; 3.
Apoptosis; Zinc-finger; Repeat; Thiol protease inhibitor
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U32974; AAC50518.1; -.
ALL121601; CAB95312.1; -.
                                                                               Natl Acad.
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28; Conservative
                                                                                                                                                                                                                                                                                                                             Eutheria; Rodentia; Sciurognathi;
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     Korneluk R.G., Mackenzie A.E.;
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Pred. No. 2.9e
8; Mismatches
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BIR 3.
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-i- SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).

-i- SUMLARITY: DELONGS TO THE IAP FAMILY.

-i- SIMILARITY: CONTAINS 3 BIR REPEATS.

-i- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                      SMART; SM00238; BIR; 3.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1;
                                                                                                                                                                                                                                         Pfam; PF00653; BIR; 3. Pfam; PF00097; zf-C3HC4; 1.
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EMBL; U88990; AAB58376.1;
MGD; MGI:107572; Birc4.
InterPro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
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    SEQUENCE
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                                                                                                                                                                                             PROSITE;
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                                                                                                                                                                                             PS50143; BIR_REPEAT_
                                                                                                                                                                                                                                                                                                                                               requires a license agreement (See http://www.isb-sib.ch/announce/
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RESULT
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20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACCUCOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INHIBITOR OF APOPT PROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED (IAP HONOLOG A) (RIAP-3) (RIAP-3).
BIRC4 OR API3 OR XIAP.
                 SEQUENCE FROM N.A. Saito N.;
  "Rattus
                                                                       NCBI_TaxID=10116;
                                                                                             Mammalia; Eutheria;
                                                                                                           Eukaryota; Metazoa;
                                                                                                                               Rattus norvegicus (Rat)
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norvegicus X-linked inhibitor of apoptosis (riap3) mRNA.";
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Pred. No. 1.7e-12;
8; Mismatches 18
                                                                                         Craniata; Vertebrata; Sciurognathi; Muridae;
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SMART: SM00184; RING; I 1.
PROSITE; PS001282; BIR_REPEAT_1; 3.
PROSITE; PS50143; BIR_REPEAT_2; 3.
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                                                                                                                                                                                                                                                                                                                                                              Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
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Pfam; PF00097; zf-C3HC4; 1.
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                    3 SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation.

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Best Local
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InterPro: IPRO01841; Znf_ring.
Pfam; PF00633; BIR; 2.
Pfam; PF00639; CARD; 1.
Pfam; PF00619; CARD; 1.
SMART; SM0023B; BIR; 2.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09JIB3;
20-AUG-2001 (
20-AUG-2001 (
20-AUG-2001 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REPEAT
ZN_FING
SEQUENCE
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_1;
Apoptosis; Repeat; Multigene fam
REPEAT 60 127 BIR
                                                               MGD; MGI:1858256; Birclg.
InterPro; IPR001370; BIR.
Pfam; PF00653; BIR; 3.
SMART; SM00238; BIR; 3.
                                                                                                                                                                    the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by an
entities requires a license agreement (See http://www.isb-
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation between the Suiss Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                             Endrizzi M.G., Hadinoto V., Growney J.D., "Genomic sequence analysis of the mouse N Genome Res. 10:1095-1102(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last anotation update)
BACULOVIRAL IAP REPENT-CONTAINING PROTEIN 16
INHIBITORY PROTEIN 7).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIRC1G OR NAIP7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIRG_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=20414747; PubMed=10958627;
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U79142; AAC39171.1; -.
                                                                                                                                     EMBL; AF242433; AAF82749.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93 RFKTFCNWPSSIPVHPEQLASAGFYYMGHSDDVKCFCCDGGLRCWESGDDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 RMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
                                                                                                                                                                                                                                                                                                           SIMILARITY: CONTAINS 3 BIR REPEATS
                                                                                                                                                                                                                                                                                                                                              FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY
                                                                                                                                                                                                                                                                                                                                SIGNALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Zinc-finger; Repeat.

4 70 BII

90 157 BII

311 345 RII
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Rodentia;
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                                                                                                                                                                                      agreement (See http://www.isb-sib
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BIR 2.
RING-TYPE.
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Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EB2268FA9A6190A4 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                             Miller W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NEURONAL APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
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Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                Dietrich W.
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RESULT 11
BIRE_MOUSE
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20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL 1AP REPEAT-CONTAINING PROTEIN 1E (NEURONAL APOPTOSIS INHIBITORY PROTEIN 5)
BIRCLE OR NAIP5 OR NAIP-RS3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99417674; PubMed-10486205; Endrizzi M., Huang S., Scharf J.M., Kelter A.R., Wirth Kunkel L.M., Miller W., Dietrich W.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-99431676; PubMed=10501978; Huang S., Scharf J.M., Growney J.D., Endria Huang S., Naip gene cluster on Chromosome functional transcripts.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIRE_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
MGD; MGI: LEFULL: InterPro; IPR001370; BIR. Pfam; PF00653; BIR; 3.
                                                                                                             or send
                                                                                                                                         use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                  This SMISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse)
                                         EMBL; U66326; AAC52974.1; MGD; MGI:1298220; Bircle.
                                                                    EMBL; AF135492; AAD56764.1; -. EMBL; AF131205; AAD56760.1; -.
                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                     Genomics 38:405-417(1996).
                                                                                                                                                                                                                                                                                                "The mouse region syntenic for human spinal muscular atrophy lies within the Lgnl critical interval and contains multiple copies of
                                                                                                                                                                                                                                                                                                                                                       STRAIN-129/SVJ;
MEDLINE-97131520; PubMed-8975718;
                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 82-168 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                           "Comparative sequence analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                             Kunkel L.M., Dietrich W.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                              interval
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                                                                                                                                                                                                                           SIMILARITY: CONTAINS 3 BIR REPEATS
                                                                                                                                                                                                                                                      FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome 10:1032-1035(1999).
                                                                                                                                                                                                                                                                                                                                        J.M., Damron D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
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278
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                                                                                                                                                                                                                                                                                                                                          Frisella A.,
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BIR
MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 134;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                             of the mouse
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mosome 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                           and human Lgn1/SMP
                                                                                                                                       Usage
                                                                                                                                                                                                                                                      INDUCED BY A VARIETY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       M.G., Dietrich W.F.;
encodes several distinct
                                                                                                                                                                                                                                                                                                                                          Beggs A.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1402;
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                                                                                                                                            and
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RESULT 12
BIRF_MOUSE
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Best Local
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SEQUENCE
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20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL IAP REPEAT CONTAINING PROTEIN IF
INHIBITORY PROTEIN 6)
                                                                                                                                                                                                                                Scharf J.M., Damron D., Frisella A., E
Kunkel L.M., Dietrich W.F.;
"The mouse region syntenic for human s
within the Lgnl critical interval and
                                                                                                                                                                                                                                                                                                                                                                     Endrizzi M.G., Hadinoto V., Growney J.D., "Genomic sequence analysis of the mouse N Genome Res. 10:1095-1102(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE-20414747; PubMed-10958627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIRF_MOUSE STANDARD; P
Q9JIB6; P81704; O09122; O09121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Apoptosis;
REPEAT
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PROSITE; PS50143;
                                                                                                                                                                                Genomics 38:405-417(1996).
-!- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS
                                                                                                                                                                                                                  exon 5.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIRC1F OR NAIP6 OR NAIP-RS4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPEAT
                                                                                                                                                -!- SIMILARITY: CONTAINS 3 BIR REPEATS
                                                                                                                                                                                                                                                                                                     MEDLINE=97131520; PubMed=8975718;
                                                                                                                                                                                                                                                                                                                   STRAIN=129/SVJ;
                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 82-168 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
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                                                                                                                                                                  SIGNALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ELYRMSTYSTFPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EELRMDMFKDWPQESPYGVEALVRAGFFYTGKKDIVRCFSCGGCLEKWAEGDDP 331
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BIR_REPEAT_2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     159695
                                                                                                                                                                                                                                                                                   Frisella A., Bruno S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 134; DB
Pred. No. 1.5e
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BIR 1.
BIR 2.
BIR 3.
BIR 4.
BIR 4.
BIR 4.
BIR 5.
BI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
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                                                                                                                                                                                                                                  spinal muscular atrophy 1 d contains multiple copies
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                                                                                                                                                                                                                                                                                                                                                                                       Naip gene
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.5e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                       Miller W., Dietrich W.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NEURONAL APOPTOSIS
                                                                                                                                                                                  INDUCED
                                                                                                                                                                                                                                                                                     Beggs A.H.,
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(See http://www.isb-sib.ch/announce/

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EMBL outstation

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RESULT
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Best Local
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Pfam; PF00653; BIR; 2.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 2.
SMART; SM00184; RING; 1.
                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EWBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                       (21
SEQUEENCE FROM N.A.
MEDLINE-97271300; PubMed-9126251;
MEDLINE-97271300; PubMed-9126251;
MEDLINE-97271300; PubMed-9126251;
                                                                                                                                                                                                                                                                                                                                                      Birnbaum M.J., Clem R.J., Miller L.K.;
"An apoptosis inhibiting gene from a nuclear polyhedrosis virus encoding a polypeptide with Cys/His sequence motifs.";
J. Virol. 68:2521-2528(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IAP3_NPVOP
P41437;
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REPEAT 60 127
REPEAT 159 227
REPEAT 278 345
SEQUENCE 1403 AA; 159823 M
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                                                                                                                                                                                                                                                                                              Ahrens C.H., Russell
Rohrmann G.F.;
                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=94187094; PubMed=8139034; Birnbaum M.J., Clem R.J., Miller L.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Orgyła pseudotsugata multicapsid polyhedrosis virus (OPMNPV).
Viruses; dsDNA viruses, no RNA stage; Baculoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1995 (Rel. 32,
01-NOV-1995 (Rel. 32,
20-AUG-2001 (Rel. 40,
APOPTOSIS INHIBITOR 3
                                                InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
                                                                        EMBL; L22564; AAB02610.1; -. EMBL; U75930; AAC59034.1; -.
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InterPro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleopolyhedrovirus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EELRMDMFKDWPQESPVGFEALVRAGFFYTGKKDIVRCFSCGGCLEKWAEGDDP
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U66327; AAC52975.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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159823 MW;
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Last annotation
(IAP-3).
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BIR 1.
BIR 2.
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Pred. No. 2.1e-09
6; Mismatches 2;
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                                                                                                                                                                                                                                                                                                          Evans J.,
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Best Local
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20-AUG-2001
APOPTOSIS 1
PROTEIN).
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Q24306;
Q1-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPEAT
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                        Cell 83:1253-1262(1995).

11- FUNCTION: APOPPOTIC SUPPRESSOR. OVEREXPRESSIO

HID-DEPENDENT CELL DEATH IN THE EYE.

11- SIMILARITY: BELONGS TO THE LAP FAMILY.

11- SIMILARITY: BELONGS TO THE LAP FAMILY.

11- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                             TISSUE-Eye imaginal disk;
MEDLINE-96(128128; PubMed-8548811;
Hay B.A., Wassarman D.A., Rubin G.M.;
"Drosophila homologs of baculovirus inhibitor of apoptosis proteins function to block cell death.";
REPEAT
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                         This SMISS-PROT entry is copyright. It is produced through
between the Swiss Institute of Bloinformatics and the SM
the European Bioinformatics Institute. There are no restr
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Arthropoda; Tracheata; He
Pterygota; Neoptera; Endopterygota; Diptera;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DROME
                                                                                                                                                                                            entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                   use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apoptosis;
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS01282; BIR_REPEAT_1; 2. PROSITE; PS50143; BIR_REPEAT_2; 2.
                                                          PROSITE; PS01282; BIR_REPEAT_1; 2. PROSITE; PS50143; BIR_REPEAT_2; 2.
                                                                                   SMART; SM00238; BIR; 2.
SMART; SM00184; RING; 1
                                                                                                                       Pram;
                                                                                                                                                                      EMBL; L49440; AAC41609.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila
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                                     Apoptosis;
REPEAT
                                                                                                                                                         FlyBase; FBgn0003691; th.
                                                                                                                                   InterPro; IPRO01370; BIR.
InterPro; IPRO01841; Znf_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 ELYRMSTYSTEPAGVPVSERSLARAGFYYTGVNDKVKCFCCGLMLDNWKLGDSP
                                                                                                         PF00097; zf-C3HC4; 1.
                                                                                                                    PF00653; BIR; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
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18 84
111 178
221 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     melanogaster (Fruit fly).
Metazoa; Arthropoda; Tracheata;
                                             Zinc-finger; Repeat.
 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Rel. 35, Created)
(Rel. 35, Last sequence update)
(Rel. 40, Last annotation update)
INHIBITOR (INHIBITOR OF APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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255 R
30076 MW;
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r; Repeat.
r; Repeat.
1,78 BIR 1.
1,78 BIR 2.
255 RING-TYPE.
255 RING-TYPE.
255 RING-TYPE.
256 P. MW; DF89175EDE85A708 CRC64;
257 MW; DF89175EDE85A708 CRC64;
                                                                                                                                                                                                        license agreement (See http://www.isb-sib.ch/announce/
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Pred.
BIR 1.
BIR 2.
RING-TYPE.
; A6C22CBEDF5AEF29 CRC64;
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No.
                                                                                                                                                                                                                                                                                                                                OVEREXPRESSION EYE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 438
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.2e-10;
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a; Brachycera;
                                                                                                                                                                                                                   Usage
                                                                                                                                                                                                                                 its content
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DIAP1)
                                                                                                                                                                                                                                                                                                                                           SUPPRESSES RPR
                                                                                                                                                                                                                     γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Insecta;
                                                                                                                                                                                                                                            restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 268;
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                                                                                                                                                                                                                                                           EMBL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 386-623 FROM N.A. SEQUENCE OF 386-623 FROM N.A. der Steege G., Draaijers T.G., Granzevino R., Velona I., Brahe C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Fetal brain:

#EDLINE-95112344; PubMed-7813013;

ROY N., Mahadevan M.S., McLean M., Shutler G., Yaraghi Z.,

Roy N., Mahadevan M.S., McLean M., Shutler G., Kang X.,

Farahini R., Baird S., Besner-Johnston A., Lefebyre C., Kang X.,

Salih M., Aubry H., Tamai K., Guan X., Loannou P., Crawford T.O.,

de Jong P.J., Surh L., Ikeda J., Korneluk R.G., Mackenzie A.;

"The gene for neuronal apoptosis inhibitory protein is partially

deleted in individuals with spinal muscular atrophy.";

cell 80:167-178(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIRL_HUMAN STANDARD; PRT; 1403 AA.
013075; 013730: 099796: 075857;
01-MOV-1997 (Rel. 35. Created)
20-AUG-2001 (Rel. 40. Last sequence update)
20-AUG-2001 (Rel. 40. Last anotation update)
20-AUG-2001 (Rel. 40. Last anotation update)
20-AUG-2001 (Rel. 40. Last anotation update)
                                                                                                                                                                                                          MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat
Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
"Suppression of apoptosis in mammalian cells by NAIP and a related
family of IAP genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MacKenzie A.E.; "Sequence of a 131-kb region of 5q13.1 containing the spinal muscular strophy candidate genes SNN and NAIP."; Genomics 48:121-127(1998).
                                                                                                                                                                                                                                                                                                                                                 Jones K., Graves T., McPherson J.;
Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 222-1403
                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (MAY-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                     der Steege G., Draaijer:
Anzevino R., Velona I.,
Buys C.H.C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A., AND REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BIRC1 OR NAIP
                                                                                                                                                                                                                                                                                                TISSUE-Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xuan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-98163755; PubMed-9503025;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INHIBITORY PROTEIN).
                                                                                                                                                                                           family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              226 ETARLRTFEAWPRNLKQKPHQLAEAGFFYTGVGDRVRCFSCGGGLMDWNDNDEP
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DISEASE: MUTATED OR DELETED FORMS OF NAIP HAVE BEEN FOUND
                                                                                                                                  SIGNALS.
TISSUE SPECIFICITY: EXPRESSED IN MOTOR NEURONS,
DISEASE: MUTATED ON DELETED FORMS OF NAIP HAVE BEEN FOUND IN
INDIVIDUALS WITH STIAL MUSCULAR ATROPUT TYPE I (SMA TYPE I). SMAS
ARE FATAL AUTOSOMAL RECESSIVE DISORDERS SUBCLASSIFIED AS TYPE I
(MEEDNIG-HOFFMANN DISEASE), TYPE II (INTERNEDIATE FORM), AND TYPE
III (MOHLFARY-KUGCLHAERG-WELANDER DISEASE) BASED UPON THE AGE OF
ONSET AND CLINICAL SEVERITY. THESE NEURODEGENERATIVE DISORDERS ARE
                                                                                                                            NEURONS.
                                                                                                                                                                          FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY A VARIETY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q., Baird S.D., Mahadevan M., Besner-Johnston J.-Y., Kang X., Lefebvre C., Ikeda J.-E., Korr
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the European Bioinformatics Institute
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between the Swiss Institute of Bloinformatics and the EMBL
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